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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/869,532	08/30/2001	Jan Wietze Huisman	VERTIS-4	4614

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MICHAELSON AND WALLACE
PARKWAY 109 OFFICE CENTER
328 NEWMAN SPRINGS RD
P O BOX 8489
RED BANK, NJ 07701

EXAMINER

TSOY, ELENA

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 02/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/869,532

Applicant(s)

HUISMAN, JAN WIETZE

Examiner

Elena Tsoy

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 30 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Art Unit: 1762

Election/Restrictions

1. Applicant's election of Claims 1-37 in Paper No. 7 is acknowledged. Non-elected Claims 38-47 have been cancelled. Because applicants did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (see MPEP § 818.03(b)).

The requirement is still deemed proper and is therefore made FINAL.

Specification

2. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.)
or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.

Art Unit: 1762

(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(f) BRIEF SUMMARY OF THE INVENTION.

(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(h) DETAILED DESCRIPTION OF THE INVENTION.

(i) CLAIM OR CLAIMS (commencing on a separate sheet).

(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: list of cross-linkers of claim 15 and limitations of claim 32, namely, coating being "relatively dense" compared to an influencing agent are not in the body of the disclosure. Amendment of the disclosure to incorporate the language of originally filed claims does not raise issue of new matter.

4. The disclosure is objected to because of the following informalities:

page 1, lines 24, language of claim 1 should be incorporated into the disclosure because claims are subject to changes.

page 2, line 9, while applicant may be his or her own lexicographer, "a closed coating" is terminology, which is not generally used in the art. Appropriate correction is required.

page 4, line 2, language of claim 8 should be incorporated into the disclosure because claims are subject to changes.

page 6, lines 4, 7, 24, language of claims 12, 13, 17, 26 should be incorporated into the disclosure because claims are subject to changes.

Art Unit: 1762

page 7, lines 3, 15, 19, 25, 44, 45, language of claims 27, 30, 33, 38, 44, 45 should be incorporated into the disclosure because claims are subject to changes.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: list of cross-linkers of claim 15 and limitations of claim 32, namely, coating being "relatively dense" compared to an influencing agent are not in the body of the disclosure. Amendment of the disclosure to incorporate the language of originally filed claims does not raise issue of new matter.

Claim Objections

5. Claim 7 is objected to because of the following informalities: "42*10⁻³", "36*10⁻³", "32*10⁻³" have symbol "*". It is suggested to use more common symbol "x".

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, lines 4-8, a phrase "a base product is manufactured, while to at least one part of the product, a coating is applied, a coating being used having a surface tension which is approximately equal to or preferably lower than the surface tension of a portion of the mass, at

Art Unit: 1762

least of the or each relevant part of the base product to which coating is applied, characterized in that to at least a portion of the base product, a first coating is applied, after which a second coating is applied over at least a portion of the first coating” renders the claim indefinite because it is not clear whether (i) there are three coatings such as a coating being applied to at least one part of the (base) product, first coating and second coating or only two coatings: first and second coatings; (ii) whether a surface tension of “a coating” is lower than the a surface tension of the mass or of the base product formed from said mass. Moreover, “*the* or each relevant part of the base product” has insufficient antecedent basis for this limitation in the claim.

For examining purposes the phrase was interpreted according to specification as “a base product is manufactured, while to at least one relevant part of the base product a first coating is applied, after which a second coating is applied over at least a portion of the first coating, said first coating having a surface tension which is approximately equal to or lower than a surface tension of the at least one portion of the base product”.

Claim 11, lines 4-6, “with respect to the surface tension at *lower* temperature” renders the claim indefinite: “lower” than what temperature? Lower than 25 °C or 50 °C or any other temperature between 25 °C- 50 °C. Also, it is not clear whether the surface tension applies to a mass or to a coating.

Claims 12, 13, improper Markush group “at least one component from the group of: A, B -- or Y” renders the claims indefinite. The proper Markush group should be recited either in the conventional manner as “at least one component selected from the group consisting of A, B --- and Y” or alternatively as “wherein at least one component is A, B --- or Y”.

Claim 15, lines 2-6, improper Markush group “from the group of A, B --- or Y” renders the claim indefinite. The proper Markush group should be recited either in the conventional manner as

Art Unit: 1762

"selected from the group consisting of A, B --- and Y" or alternatively as "wherein --- is A, B or Y".

The term "relatively low" in claim 20 is a relative term, which renders the claim indefinite. The term "relatively low" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Specification as filed discloses that "base products having relatively low surface tensions are also applicable" (See page 3, line 3, page), and that a molded mass having a surface tension of less than about 40 dyne/cm will readily clear from the mold (See page 4, lines 3-5). Also the specification discloses some examples of a surface tension of a molded mass such as 44 dyne/cm, 36 dyne/cm (See page 21, lines 19, 25), 32 dyne/cm (See page 20, line 29). So it is not clear what ranges of surface tension are covered by the claim.

The term "relatively dense" in claim 32 is a relative term which renders the claim indefinite. The term "relatively dense" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. So it is not clear what ranges of relative density of coatings are covered by the claim.

Claims 36, line 2, Claim 37, line 2, "vol. %" renders the claim indefinite. It is not clear whether "vol. %" is based on volume of a coating composition or total volume of coating composition and silicone oil. For examining purposes "vol. %" was interpreted according to specification (See page 44, line 15), namely, as based on volume of total volume of coating composition together with silicone oil.

Art Unit: 1762

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **Claims 1-22, 26-33** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Andersen et al (US 5,863,772).

As to claims 1-3, Andersen et al disclose a method for manufacturing coated products comprising forming a base product from a mass containing starch as a natural polymer in a heated mold cavity including molds typically used in conventional injection molding processes (See column 16, lines 50-53) such that cross-linkage of the natural polymer occurs (See column 56, lines 12-21), and applying one or more organic coatings optionally with inorganic coating (first and second coatings) to the surface of the formed base product (See column 66, line 42).

Andersen et al fail to teach that: (i) part of the base product is covered with the first and second coatings and another part of the base product is covered by first or second coating only; (ii) the first coating has a surface tension which is approximately equal to or lower than a surface tension of the surface of the base product.

As to (i), Andersen et al further teach that coatings can be used to alter the surface characteristics of the articles in a number of ways, including sealing and protecting the articles, providing a more finished surface to the articles, and providing additional strength (See column 64, lines 60-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have covered some parts of a base product of Andersen et al with

Art Unit: 1762

one coating only and other parts with two coatings with the expectation of providing the desired surface characteristics of the coated product depending on intended use of a final product.

As to (ii), Andersen et al further teach that it is important to select variables of a substrate to be coated such as *wettability*, porosity, etc., as well as variables of a coating formulation such as solvent base, *surface tension*, etc., to achieve a uniform film with minimal defects on the surface of the coated product.

It is a commonly known that a coating formulation having surface tension higher than that of a substrate does not wet the substrate, as evidenced by Mueller (US 4,098,742, column 1, lines 35-45), and typically surface tension-reducing agents are incorporated into coating formulations to lower the surface tension, as evidenced by Keeler (US 4,172,064, column 2, lines 29-42).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have formulated a composition for a first coating in Andersen et al with the use of surface tension-reducing agents so that a surface tension of the first coating composition is approximately equal to or lower than a surface tension of the surface of a base product with the expectation of providing the desired uniform coating with minimal defects.

As to claim 4, Andersen et al further teach that a starch-based mass can be used as a substitute for a conventional paper-forming mass because the starch-based mass yields containers and other articles of a similar cross-section having comparable critical mechanical properties comparable to those made from the conventional paper-forming mass (See column 6, lines 5-10). In other words, a molded product in Andersen et al can also be made from a conventional paper-forming mass.

The Examiner Note: the meaning of a phrase "at least one mass is at least substantially manufactured as paper-forming mass" is not clear: whether mass is manufactured using a paper-

Art Unit: 1762

making method or mass is formed from the same components as paper-forming mass. After reviewing the specification as a whole, the Examiner interpreted the claim as relating to a mass, which is formed substantially from the same components as paper-forming mass.

As to claim 5, mold release agents such as silicones, waxes in an amount 0.05-15% by weight of the total solids (See column 53, lines 51-56, 66-67) are incorporated into the mass to improve the release of the molded product from the mold (See column 16, lines 27-30). It is the Examiner's position that silicone release agents function substantially identically as those of claimed invention because silicones are added in claimed amount of 0.2 wt% (See specification, page 5, lines 1-5) to the mass, which is identical to the mass of the claimed invention and molded a heated mold.

As to claim 6, it is well known to use silicones also as surface reducing agents, as evidenced by Sano et al (US 3,977,888, column 1, lines 20-21).

As to claims 7, 8, a mass after molding (before coating) in Andersen et al appears to have the surface tension within the claimed range of less than 44 dyne/cm and greater than 30 dyne/cm inherently, because a molded product of Andersen et al comprises substantially the same components as claimed invention such as starch, cellulose fibers, silicones, etc. (See specification, page 19), can be easily released from the mold after injection molding (See Andersen et al, column 16, lines 27-33 and specification, page 4, lines 3-6) and can be coated with substantially the same organic coatings. It is held that where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, claimed properties or functions are presumed to be inherent. See MPEP 2111.02, 2112.01. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the

Art Unit: 1762

same, the applicant has the burden of showing that they are not." In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Moreover, suitable range of mass surface tension can be determined through routine experimentation depending on intended use of a final product. As well known in the art, the mass surface tension is result-effective variable: the less surface tension of a mass the easier release from the mold, but more difficult to coat. It is held that it is not inventive to discover the optimum or workable ranges of result-effective variables by routine experimentation. In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977). See also In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have determined the optimum values of a mass surface tension (including those of claimed invention) through routine experimentation depending on intended use of a final product.

As to a surface tension of coating, as was discussed above, surface tension of coating in Andersen et al, including water-based coating (See column 66, lines 55-64), should be approximately equal to or *lower* than a surface tension of the surface of the molded mass to achieve a uniform film with minimal defects on the surface of the coated molded mass. Consequently, the surface tension of the first coating in Andersen et al should be approximately equal to or *lower* than 44 dyne/cm. Also, the coating in Andersen et al appears to have the surface tension within the claimed range of less than 40 dyne/cm and greater than 27 dyne/cm inherently, because the coating is substantially identical to that of claimed invention: it is also water-based and comprises substantially the same components such as epoxy resins, melamine, acrylics, polyethylene, waxes, cellulose acetate, polylactic acid, polyvinyl alcohol or mixtures thereof (See column 65, lines 58-67; column 66, lines 1-24).

Art Unit: 1762

As to claim 9, the mass, upon leaving the mold has moisture content of less than 3 wt % (See column 70, lines 6-29) while water is introduced into the molded mass by coating (See column 66, lines 63-67).

As to claim 10, a water-based system is used for coatings (See column 66, lines 56-65).

It is the Examiner's position that the water-based system is one-phase system because silicones or waxes are used in an amount as little as 0.05-0.2 wt %.

As to claim 11, Andersen et al further teach that the first coating can be applied either to a hot product directly in the mold or at ambient temperature (See column 65, lines 33-45).

As to claims 12-16, one or more organic coating compositions (See column 66, lines 41-42) comprise *epoxy* resins, melamine, catalysts, acrylics, polyethylene, waxes, cellulose acetate, polylactic acid, polyvinyl alcohol or *mixtures* thereof (See column 65, lines 58-67; column 66, lines 1-24). It is well known in the art that *epoxy* resins contain reactive *epoxide* groups. In other words, the organic coating compositions comprise *epoxides* (cross-linker).

As to claim 17, one or more organic coatings provide barrier to moisture (increases water vapor proofness) (See column 66, line 18).

As to claim 18, FDA-approved coating is used for contact with foodstuffs (See column 66, lines 31-32).

As to claim 19, one or more organic coatings provide barrier to grease or oils (See column 66, line 19).

As to claim 20, as was discussed above, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have covered some parts of a base product of Andersen et al with one coating only (rendered relatively low) or keep them clear from coating

Art Unit: 1762

and other parts with two coatings with the expectation of providing the desired surface characteristics of the coated product depending on intended use of a final product.

As to claim 21, Andersen et al teach that different products can be made using different masses depending on intended use of a final product (See column 28, lines 40-54). Andersen et al fail to teach that the injection-molded product is made by integrally joining parts from different masses.

However, it is well known in the art that different masses can be used to make a product having integrally joined parts of different characteristics, e.g., flexible and rigid parts, using injection-molding procedure, as evidenced by Hargadon (US 3,601,862, column 2, lines 39-55).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used different masses for making different parts in injection-molding procedure of Andersen et al with the expectation of producing a molded product with integrally joined parts having different desired characteristics depending on intended use of a final product since it is well known in the art to use different masses in injection-molding procedure for making a product with integrally joined parts of different characteristics, as evidenced by Hargadon.

As to claim 22, a coating may be applied by spraying (See column 65, lines 18-21).

As to claim 26, a coating may be applied to a molded product (having a receiving cavity) by dipping (See column 65, lines 18-21).

As to claims 27-32, Andersen et al further teach that when water is added with the coating or a water-based coating is used, an additional conditioning component is added to the formed product. The structural matrix of the product will absorb the water from the coating into the matrix to provide additional moisture thereto so that the product will be softened. The coating can also be

Art Unit: 1762

flash dried on the surface and at the same time leave the moisture on the inside of the product for conditioning of the matrix a water-based coating. See column 66, lines 53-67; column 67, lines 1-3. Thus, water is an influencing agent acting as a softener, and water-based coating is relatively dense than water.

Rusincovitch, Jr. teach that silicone oil as a surface reducing agent can be added to a coating composition to provide surface tension reducing effect (See column 3, lines 11-20; column 5, lines 48-49, 68; column 6, lines 1-7). in an amount 2.5-5 % by weight

As to claim 33, waxes are incorporated into coating compositions to provide a barrier to moisture, oxygen and grease (See column 66, lines 17-20). It is well known in the art that waxes have surface tension reducing properties and are used as surface reducing agents in coating compositions to provide reduced surface tension of a coated layer, as evidenced by Rusincovitch, Jr. (See column 66, lines 69). Therefore, the waxes incorporated into coating compositions of Andersen et al would also provide reduced surface tension of a coated layer.

10. **Claims 23, 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Andersen et al (US 5,863,772) in view of Ito (US 3,659,787).

Andersen et al, as applied above, further teach that the one or more coatings can be applied using any conventional coating means known in the art of manufacturing paper including blade, air-knife, dipping and spraying (See column 65, lines 20-33). However, Andersen et al, do not expressly show that the known coating means include atomizing (Claim 23) or airless spraying or atomizing (Claim 24).

Ito teaches that the airless apparatus which atomizes and sprays coating material has advantages over several other techniques of depositing the coating material such as reducing the

Art Unit: 1762

amount of coating material sprayed and being capable of projecting the coating material into the recesses of articles (See column 1, lines 1-25).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used airless apparatus which atomizes and sprays for coating a molded product in Andersen et al with the expectation of providing the desired reduction of the amount of coating material sprayed and access into the recesses of the product, as taught by Ito.

11. **Claim 25** is rejected under 35 U.S.C. 103(a) as being unpatentable over Andersen et al (US 5,863,772) in view of JP 07024367.

Andersen et al, as applied above, fail to teach that spraying is controlled by compressed air.

JP 07024367 teaches that coating of a narrow, small part of a material by spraying with compressed air-control prevents over spray while keeping maintaining a high coating quality (See Abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used controlled spraying in Andersen et al with compressed air with the expectation of preventing over spray while keeping maintaining a high coating quality providing, as taught by JP 07024367.

12. **Claims 34-37** are rejected under 35 U.S.C. 103(a) as being unpatentable over Andersen et al (US 5,863,772) in view of Rusincovitch, Jr. (US 5,304,411).

Andersen et al, as applied above, fail to teach that as surface reducing agents, oily product (Claim 34) such as silicone oil (Claim 35) in an amount of 0.5-15 vol. % (Claim 36) or 2-10 vol. % (Claim 37) are added to coating compositions to provide a reduction of the surface tension of the coating layer after drying.

Rusincovitch, Jr. teaches that a surface reducing agent such as silicone oil added to an ink (coating) composition provides surface tension reducing effect (See column 3, lines 11-20; column 5, lines 48-49, 68).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have added silicone oil as a surface reducing agent to a coating composition in Andersen et al with the expectation of providing the desired surface tension reducing effect, as taught by Rusincovitch, Jr.

As to the claimed amount of 0.5-15 vol. %, Rusincovitch, Jr. teaches that when the quantity of silicone oil of less 2.5 wt % (based on weight of total composition together with silicone oil) is insufficient to provide the desired surface reducing effect of an ink (coating) composition, if more than 5 wt%, the siliconized pattern becomes blurred (See column 6, lines 1-7), i.e. the concentration of silicone oil in a coating composition is a result-effective parameter, all other things being equal.

It is held that it is not inventive to discover the optimum or workable ranges of result-effective variables by routine experimentation. In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977). See also In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Also, it is held that concentration limitations are obvious absent a showing of criticality. Akzo v. E.I. du Pont de Nemours 1 USPQ 2d 1704 (Fed. Cir. 1987).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have discovered the optimum or workable ranges of concentration limitations (including those of claims 36, 37) in Andersen et al by routine experimentation in the absence of showing criticality since general conditions are taught by Rusincovitch, Jr.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy whose telephone number is (703) 605-1171. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on (703) 308-2333. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Elena Tsoy

Elena Tsoy
Examiner
Art Unit 1762

February 7, 2003